

A high dielectric composite material obtained by subjecting submicron particles of an inorganic filler containing a metal as its essential component to an insulating treatment such as a chemical treatment, further subjecting to a surface treatment for improving their compatibility with organic resins, and then dispersing in an organic resin, has a dielectric constant of 15 or above, with its dielectric loss tangent in the frequency region of from 100 MHz to 80 GHz being 0.1 or less, and can therefore be used effectively for multilayer wiring boards and module substrates.